

# **Clean Air Interstate Rule**

MassDEP Stakeholder Meeting

August 3, 2006

# Purpose of Meeting

- Follow-up to January 31, 2006 Stakeholder meeting on upcoming CAIR, CAMR, RACT and BART requirements
- Preliminary review of issues that must be addressed prior to adopting State CAIR regulation

# Purpose of Meeting

- Discuss issues and preferences related to areas of state flexibility under CAIR
- Review potential changes - current NO<sub>x</sub> SIP Call program (310 CMR 7.28) vs. MA CAIR program
- Obtain stakeholder input prior to drafting State CAIR regulation
- Stakeholder comments by August 18<sup>th</sup>

# **CAIR – Regulation and SIP Timeframe**

- Draft CAIR regulation will be issued for stakeholder review and comment within next 2-3 months
- New regulation will be effective for trading program in 2009
- Final SIP to EPA and State regulation in effect by March 31, 2007

# OTC “CAIR+” Discussions

- Ozone Transport Commission is reviewing “CAIR+” options:
  - EGU reductions greater than CAIR
  - Inclusion of large non-EGU boilers in CAIR program
  - Emission reductions on High Energy Demand Days
- State CAIR regulation and SIP development must go ahead before OTC process is resolved
- OTC is planning stakeholder meetings related to OTC CAIR+ discussion

# CAIR - Overview

- 5/12/05 final CAIR found that 28 states “contribute significantly” to non-attainment of 8-hour ozone and/or PM<sub>2.5</sub> standards in downwind states
- EPA determined the emission reductions that each contributing state must achieve
- Based on the level of reductions that can be achieved with “highly cost-effective” controls on electric generating units (EGUs)

# CAIR – Overview

- Caps NO<sub>x</sub> and SO<sub>2</sub> *annual* emissions from EGUs in states that contribute to PM 2.5 non-attainment
  - MA not included in annual program
- Caps NO<sub>x</sub> *seasonal* emissions from EGUs in states that contribute to ozone non-attainment
  - MA included in ozone season NO<sub>x</sub> program
- 2-phase declining seasonal emission caps:
  - Phase 1 2009 – 2014
  - Phase 2 2015 and thereafter

# CAIR –MA Status

- EPA used 1999-2002 heat input multiplied by fuel-adjustment factors of: 1.0 for coal, 0.6 for oil and 0.4 for gas to set State caps
- MA CAIR Ozone Season NO<sub>x</sub> caps (tons)
  - 2009 – 2014: 7,551
  - 2015 and beyond: 6,293
  - MA NO<sub>x</sub> SIP Call Budget: 12,861
- For 2009, 5,310 fewer NO<sub>x</sub> allowances for MA sources



# CAIR Implementation

- Combination of Federal and State elements
- Federal CAIR rule issued 5/05; requires State submit a SIP showing how it will achieve CAIR reductions
- State can achieve reductions either from EGUs or other sources
- If a state doesn't achieve all of the reductions from EGUs, it can't participate in the CAIR trading program

# CAIR - FIP

- Federal Implementation Plan (FIP) issued March 2006
- Implements CAIR until EPA has approved a State's CAIR SIP
- Uses EPA's allocation methodology
- EPA will not allocate 2009 allowances pursuant to FIP provided State submits its allocation covering at least 2009-2011 by April 30, 2007
- Gives states time (but just barely) to have SIP approved and have allocations made according to State methodology

# CAIR - SIP

- EPA provides a model cap-and-trade rule for states to adopt
- If a State wants its EGUs to participate in the CAIR trading program, it must adopt EPA's model rule in its CAIR SIP.
- States are given flexibility to tailor aspects of State programs
- MA CAIR regulation will incorporate EPA model rule provisions with MA regulatory provisions for aspects where flexibility is allowed

# CAIR Flexibility Provisions

- **Applicability:** How to treat NO<sub>x</sub> SIP Call sources that do not meet federal CAIR applicability criteria
- **Opt-ins:** Whether to allow sources that do not meet CAIR EGU definition to opt-in to the CAIR trading program
- **Allocation:** How to allocate allowances (input vs. output, set-asides for renewables, etc.)

# Applicability: Federal CAIR

- Fossil fuel fired units serving turbines  $> 25$  MW
- Limited cogen exemption
  - Must meet certain efficiency standards and sell no more than  $1/3$  of electricity to grid
- Biomass
  - Included if burn ANY fossil fuel
- Municipal Waste Combustors
  - Included if burn  $> 20\%$  fossil fuel

## **Applicability: NO<sub>x</sub> SIP Call Sources**

- How should MA deal with NO<sub>x</sub> SIP Call sources not subject to federal CAIR applicability?
- NO<sub>x</sub> SIP Call includes EGUs 15-25 MW & non-EGUs > 250 mmBtu
- If included in CAIR, MA budget will be increased to accommodate these sources
- If not included in CAIR, MA must maintain emission reductions from those sources
- MA must include all or none of these sources in CAIR

# Applicability: NO<sub>x</sub> SIP Call Sources

Propose to include all NO<sub>x</sub> SIP Call sources in CAIR

NO<sub>x</sub> Budget units that do not meet federal CAIR applicability:

Blackstone Street

Doreen

Framingham

GE

Kendall Square, unit S6

MIT

Mystic, unit MJ-1

New Boston, unit NBJ-1

Peabody-Waters River, unit 1

Trigen – Kneeland St. Station

West Springfield, unit 10

Woodland

Somerset, unit 11 ????

# **Applicability: NO<sub>x</sub> SIP Call Sources**

- Must determine how much to increase the budget
- Limited guidance by EPA on how to calculate this budget increase; will require discussions with EPA Region 1
- We are open to suggestions



# Opt-in Units

- States can decide whether or not to allow non-CAIR units to opt-in
- Eligible units must vent through a stack and meet Part 75 monitoring and recordkeeping requirements
- State can allow, but cannot require, sources to opt-in; if allowed, budget will need to be increased

# Opt-in Units

- If included, must incorporate applicable model rule language for these sources
  - Sources are allocated at 70% of their baseline emissions
- Unclear what types of sources and how many would want to opt in since no sources opted-in to NOx SIP Call
- Propose to include the opt-in provision; this may be useful for new ICI boiler requirements or CAIR Plus

# Allocation Issues

- Updating or Permanent
- Input or Output-based
- Public Benefit Set Aside
- New Unit Set Aside

# Allocation: Updating or Permanent

- CAIR Model Rule employs permanent allocation using heat input baseline from 2000-4; retired units continue receiving allocations
- Current NOx Budget Program uses updating allocation (rolling baseline)
- Propose to use an updating allocation methodology; retired units will eventually stop receiving allowances

# Allocation: Input or Output Based

- CAIR Model Rule is input-based
- NOx Budget Program is output-based
- Propose an output-based allocation methodology because it rewards improvements in efficiency

# Allocation: Calculation Details

- Propose to use allocation formulas similar to the current NOx Budget Program
- Should we allocate to steam at same rate as electricity as in current NOx Budget Program?
  - Electricity - 1.5 lbs NOx/MWh
  - Steam - 0.44 lbs NOx/mmBtu<sub>output</sub>

# Allocation: Public Benefit Set Aside

- For Energy Efficiency & Renewable Energy Projects
- Current NOx Budget Program PBSA = 643 tons
- PBSA was fully subscribed in 2005 and will be fully subscribed in 2006
- Propose to keep at 5%
  - CAIR Phase I - 378 tons (before budget expansion)
  - CAIR Phase II - 315 tons (before budget expansion)

# Allocation: New Unit Set Aside

- For first years of a unit's operation
- Current NOx Budget Program New Unit Set Aside = 643 tons
- The New Unit Set Aside was fully subscribed in 2003 and 2005; almost fully subscribed in 2004
- Propose to keep at 5%
  - CAIR Phase I - 378 tons (before budget expansion)
  - CAIR Phase II - 315 tons (before budget expansion)



# **Allocation: General Provisions of Set Asides**

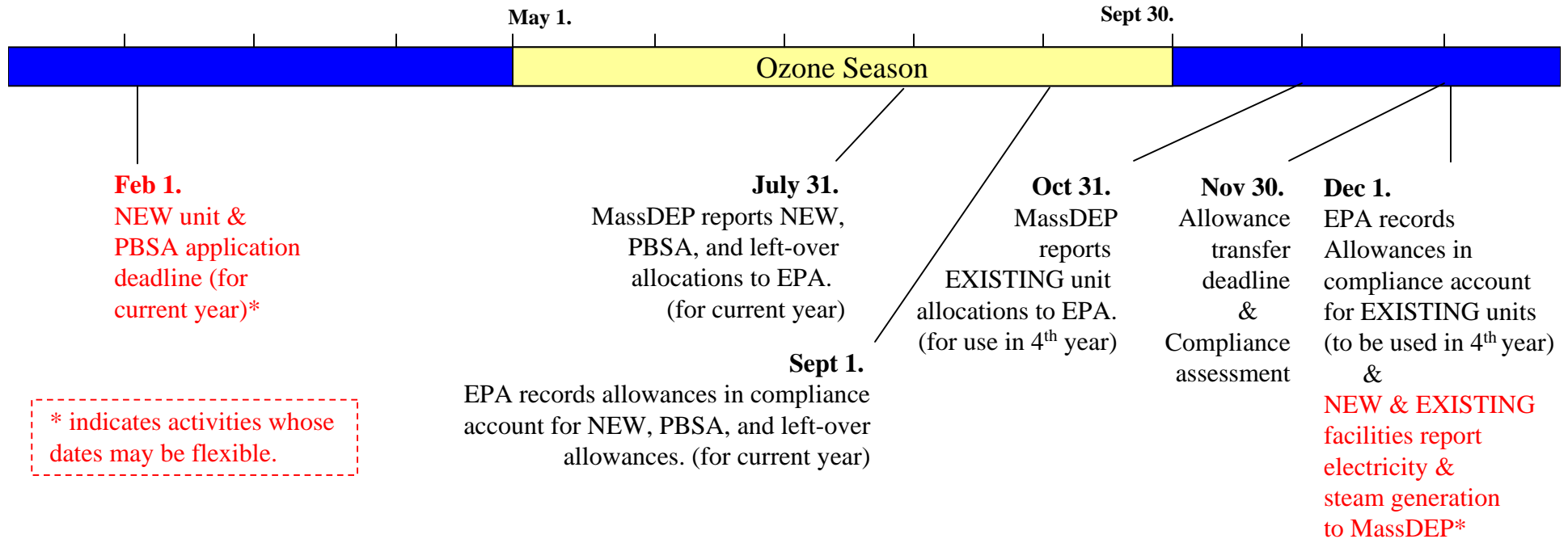
## **Propose to keep current NOx Budget Program provisions**

- Unallocated set aside allowances will be banked
- If requested allocations from a set aside exceed available allowances, up to 2% of total allowances can be transferred from one set aside to the other (provided available)
- If after allocation in a given year, banked allowances are 10% of the State budget or greater, than allowances in excess of 5% of the State budget are allocated to existing units

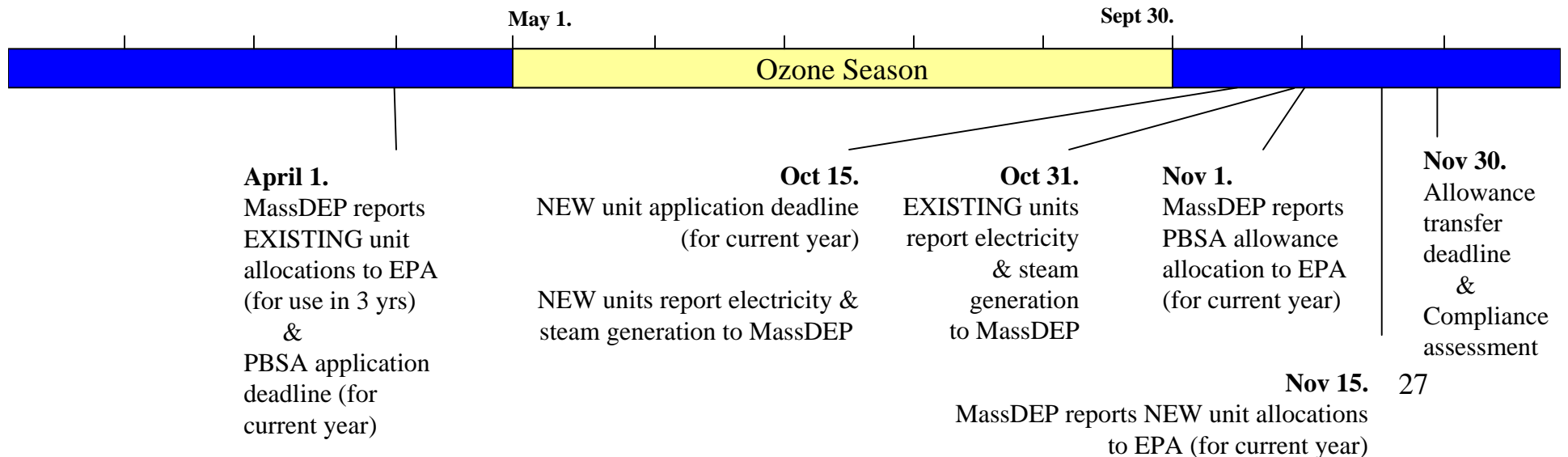
# Allocation: Timing Issues

- CAIR timelines are different than current NOx Budget Program.
- Most EPA deadlines cannot be changed.

# Mass CAIR



# NOx Budget Program



# Allocation: Timing Issues

- Timelines for reporting data and receiving allowances will be different under CAIR than NOx Budget program
- Facilities may have more time to report output data to MassDEP; considering delaying this annual obligation from Oct 31 to Dec 1
- Allocation issues arise because CAIR requires MassDEP to determine NEW unit allocations before the end of the ozone season

# **Allocation: Should we allocate to NEW Units in Year 1?**

<b>CAIR Model Rule</b>	<b>New units must purchase all allowances from market</b>
<b>NOx Budget Program</b>	<b>Allocate at the end of O3 season using output data</b>

**We propose to allocate to new units in year 1**

<b>Mass CAIR Option 1</b>	<b>Allocate to facilities at: (Greater of capacity utilization or 0.9) x 3672 x nameplate capacity</b>
<b>Mass CAIR Option 2</b>	<b>Allocate to facilities at: Maximum permitted capacity x 50%. If facility does not have first fire by July 24<sup>th</sup>, then allocate 0 allowances in year 1</b>

# **Allocation: How Many Years to Allocate from New Unit Set Aside**

CAIR Model Rule      **10-11** seasons

NOx Budget Program      **4** seasons

Mass CAIR      **4<sup>+</sup>** seasons

# **Allocation: How Many Years to Allocate from New Unit Set Aside**

Seasons allocated as a new unit depends on several factors:

- Whether new units receive allowances their first season of operation
- How far into future allocate to “existing” units
  - CAIR Model Rule – 6 years
  - NOx Budget Program – 3 years
  - Mass CAIR – propose 4 years (CAIR minimum)
- Number of ozone seasons worth of output data required for new units to be allocated as “existing” units
  - CAIR Model Rule – 5 full seasons
  - NOx Budget Program – 0 full seasons
  - Mass CAIR – propose 1 full season or less

**We would like your feedback.**

**Please submit comments by August 18<sup>th</sup>.**

**Questions & comments should be directed to:**

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